



#7

SEQUENCE LISTING

<110> Ebner et al.

<120> PT049P1

<130> Serine/Threonine Phosphatase Polynucleotides, Polypeptides, and Antibodies

<140> US 09/941,831

<141> 2001-08-30

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<151> 2001-02-28

<150> US 60/186,350

<151> 2000-03-02

<160> 32

<170> PatentIn version 3.2

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 195 200 205
 Ser Thr Leu Pro Ile Phe Ser Leu Gly Pro Ser Ala Leu Gln Arg Gly
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 225 230 235 240
 Leu Arg Ser Ile Ala Arg Phe Ser Ser Lys Ser Lys Ser Met Asp Lys
 245 250 255
 Ser Asp Glu Glu Leu Gln Phe Pro Lys Glu Leu Met Glu Asp Trp Ser
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 35 40 45
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 Gly Asn Val Val Ala Leu Trp Glu Arg Leu Val His Glu Leu Asp Thr
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Gln	Glu 130	Ser	Leu	Arg	Arg	Gln 135	Val	Ser	Ala	Ile	Asn 140	Arg	Leu	Ala	Glu		
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Gln	Arg	Ala	Gly	Ala 165	Asp	Val	Glu	Lys	Lys 170	Gly	Ala	Gly	Arg	Thr 175	Glu		
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Ala Ala Cys His Leu Lys Leu Glu Asp Tyr Asp Lys Ala Glu Thr Glu					
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Leu Asp Leu Gln Arg Cys Val Ser Leu Glu Pro Lys Asn Lys Val Phe					
	115		120		125
Gln Glu Ala Leu Arg Asn Ile Gly Gly Gln Ile Gln Glu Lys Val Arg					
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Tyr Met Ser Ser Thr Asp Ala Lys Val Glu Gln Met Phe Gln Ile Leu					
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Thr Asp Leu Met Leu Ala Ala Leu Arg Thr Leu Val Gly Ile Cys Ser					
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Glu His Gln Ser Arg Thr Val Ala Thr Leu Ser Ile Leu Gly Thr Arg					
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Arg Val Val Ser Ile Leu Gly Val Glu Ser Gln Ala Val Ser Leu Ala					
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 Leu Leu Gln Arg Ala Ala Ala Gly Gly Leu Ala Met Leu Thr Ser Met
 835 840 845
 Arg Pro Thr Leu Cys Ser Arg Ile Pro Gln Val Thr Thr His Trp Leu
 850 855 860
 Glu Ile Leu Gln Ala Leu Leu Leu Ser Ser Asn Gln Glu Leu Gln His
 865 870 875 880
 Arg Gly Ala Val Val Val Leu Asn Met Val Glu Ala Ser Arg Glu Ile
 885 890 895

Ala Ser Thr Leu Met Glu Ser Glu Met Met Glu Ile Leu Ser Val Leu
900 905 910

Ala Lys Gly Asp His Ser Pro Val Thr Arg Ala Ala Ala Cys Leu
915 920 925

Asp Lys Ala Val Glu Tyr Gly Leu Ile Gln Pro Asn Gln Asp Gly Glu
930 935 940

<210> 20

<211> 449

<212> PRT

<213> Homo sapiens

<400> 20

Met Arg Glu Ser Gly Trp Lys Leu Ile Asp Pro Ile Ser Asp Phe Gly
1 5 10 15

Arg Met Gly Ile Pro Asn Arg Asn Trp Thr Ile Thr Asp Ala Asn Arg
20 25 30

Asn Tyr Glu Ile Cys Ser Thr Tyr Pro Pro Glu Ile Val Val Pro Lys
35 40 45

Ser Val Thr Leu Gly Thr Val Val Gly Ser Ser Lys Phe Arg Ser Lys
50 55 60

Glu Arg Val Pro Val Leu Ser Tyr Leu Tyr Lys Glu Asn Asn Ala Ala
65 70 75 80

Ile Cys Arg Cys Ser Gln Pro Leu Ser Gly Phe Tyr Thr Arg Cys Val
85 90 95

Asp Asp Glu Leu Leu Leu Glu Ala Ile Ser Gln Thr Asn Pro Gly Ser
100 105 110

Gln Phe Met Tyr Val Val Asp Thr Arg Pro Lys Ile Trp His Phe Leu
115 120 125

Val Leu Ile Met Arg Ile Val Leu Gln Leu Ala Lys Met Asn Leu Met
130 135 140

Asp Ile Thr Lys Ile Phe Ser Leu Leu Gln Pro Asp Lys Glu Glu Glu
145 150 155 160

Asp Thr Asp Thr Glu Glu Lys Gln Ala Leu Asn Gln Ala Val Tyr Asp
165 170 175

Asn Asp Ser Tyr Thr Leu Asp Gln Leu Leu Arg Gln Glu Arg Tyr Lys
180 185 190

Arg Phe Ile Asn Ser Arg Ser Gly Trp Gly Val Pro Gly Thr Pro Leu
195 200 205

Arg Leu Ala Ala Ser Tyr Gly His Leu Ser Cys Leu Gln Val Leu Leu
210 215 220

Ala His Gly Ala Asp Val Asp Ser Leu Asp Val Lys Ala Gln Thr Pro
 225 230 235 240
 Leu Phe Thr Ala Val Ser His Gly His Leu Asp Cys Val Arg Val Leu
 245 250 255
 Leu Glu Ala Gly Ala Ser Pro Gly Gly Ser Ile Tyr Asn Asn Cys Ser
 260 265 270
 Pro Val Leu Thr Ala Ala Arg Asp Gly Ala Val Ala Ile Leu Gln Glu
 275 280 285
 Leu Leu Asp His Gly Ala Glu Ala Asn Val Lys Ala Lys Leu Pro Val
 290 295 300
 Trp Ala Ser Asn Ile Ala Ser Cys Ser Gly Pro Leu Tyr Leu Ala Ala
 305 310 315 320
 Val Tyr Gly His Leu Asp Cys Phe Arg Leu Leu Leu Leu His Gly Ala
 325 330 335
 Asp Pro Asp Tyr Asn Cys Thr Asp Gln Gly Leu Leu Ala Arg Val Pro
 340 345 350
 Arg Pro Arg Thr Leu Leu Glu Ile Cys Leu His His Asn Cys Glu Pro
 355 360 365
 Glu Tyr Ile Gln Leu Leu Ile Asp Phe Gly Ala Asn Ile Tyr Leu Pro
 370 375 380
 Ser Leu Ser Leu Asp Leu Thr Ser Gln Asp Asp Lys Gly Ile Ala Leu
 385 390 395 400
 Leu Leu Gln Ala Arg Ala Thr Pro Arg Ser Leu Leu Ser Gln Val Arg
 405 410 415
 Leu Val Val Arg Arg Ala Leu Cys Gln Ala Gly Gln Pro Gln Ala Ile
 420 425 430
 Asn Gln Leu Asp Ile Pro Pro Met Leu Ile Ser Tyr Leu Lys His Gln
 435 440 445

Leu

<210> 21
 <211> 199
 <212> PRT
 <213> Homo sapiens

<400> 21
 Met Trp Val Trp Pro Ser Thr Trp Ala Thr Val Met Gly Ser Pro Lys
 1 5 10 15
 Ala Pro Tyr Leu Gln Ala Ala Ser Val Val Ser Leu Ser Trp Phe Phe
 20 25 30
 Thr Phe Gly Val Ala Ile Phe Ser Arg Ser Pro Trp Ala Cys Ser Ala

35					40					45					
Asp	Ile	Pro	Ala	Phe	Ser	Ala	Ala	Ala	Arg	Met	Leu	Cys	Gly	Ser	Val
50						55					60				
Met	Ser	Ser	Phe	Trp	Glu	Glu	Glu	Lys	Thr	Ala	Gly	Arg	Arg	Cys	Gly
65					70					75					80
Glu	Arg	Gly	Val	Thr	Gly	Arg	Thr	Val	Asp	Pro	Pro	Gly	Gly	Gly	Arg
				85					90					95	
Ile	Met	Thr	Leu	Lys	Thr	Cys	Leu	Gly	Lys	Val	Arg	Lys	Ser	Ser	Lys
			100					105					110		
Val	Leu	Pro	Glu	Asp	Ser	Gln	Ser	Pro	Thr	Leu	Thr	Leu	Asp	Gln	Thr
		115					120					125			
Arg	Ile	His	Ser	Ser	Arg	Asp	Ala	Phe	Ser	Ser	Ile	Ser	Gly	Cys	Ser
	130					135					140				
Lys	Phe	Thr	Ala	Val	Arg	Lys	Arg	Met	Ala	Asp	Lys	Leu	Pro	Val	Gly
145					150					155					160
Gln	Arg	His	Pro	Glu	Ala	Gly	Leu	Leu	Leu	Leu	Leu	Ser	Trp	Trp	Arg
				165				170						175	
Thr	Ser	Ser	Ser	Leu	Leu	Leu	Thr	Ser	Pro	Arg	Ala	Pro	Pro	Pro	Ser
			180					185					190		
Ala	Ser	His	Pro	Arg	Phe	Pro									
		195													

<210> 22
 <211> 141
 <212> PRT
 <213> Homo sapiens

<400> 22															
Met	Lys	Val	Lys	Ser	Leu	Glu	Asp	Ala	Glu	Lys	Asn	Pro	Lys	Ala	Ile
1				5					10					15	
Asp	Thr	Trp	Ile	Glu	Ser	Ile	Ser	Glu	Leu	His	Arg	Ser	Lys	Pro	Pro
			20					25					30		
Ala	Thr	Val	His	Tyr	Thr	Arg	Pro	Met	Pro	Asp	Ile	Asp	Thr	Leu	Met
		35					40					45			
Gln	Glu	Trp	Ser	Pro	Glu	Phe	Glu	Glu	Leu	Leu	Gly	Lys	Val	Ser	Leu
	50					55					60				
Pro	Thr	Ala	Glu	Ile	Asp	Cys	Ser	Leu	Ala	Glu	Tyr	Ile	Asp	Met	Ile
65					70					75					80
Cys	Ala	Ile	Leu	Asp	Ile	Pro	Val	Tyr	Lys	Ser	Arg	Ile	Gln	Ser	Leu
				85					90				95		
His	Leu	Leu	Phe	Ser	Leu	Tyr	Ser	Glu	Phe	Lys	Asn	Ser	Gln	His	Phe
			100					105					110		

Lys Ala Leu Ala Glu Gly Lys Lys Ala Phe Thr Pro Ser Ser Asn Ser
 115 120 125

Thr Ser Gln Ala Gly Asp Met Glu Thr Leu Thr Phe Ser
 130 135 140

<210> 23
 <211> 234
 <212> PRT
 <213> Homo sapiens

<400> 23
 Ala Arg Gly Ile Ile Lys Ile Val His Lys Asn Arg Ala Gln Met Leu
 1 5 10 15

Thr Arg Asp Arg Ala Phe Glu Ser Thr Leu Lys Ser Trp Glu Asp Lys
 20 25 30

Gln Lys Cys Asp Ser Gly Lys Pro Val Leu Arg Thr His Leu Tyr Ile
 35 40 45

His His Ala Ile Asp Leu Ala Thr Glu Glu Val Ser Gln Met Gln Leu
 50 55 60

Cys Ser Gln Ala Ala Glu Glu Leu Ile Thr Arg Ile Cys Asp Ala Ala
 65 70 75 80

Thr Ile His Cys Leu Leu Glu Gln Glu Leu Ala His Ala Val Asn Ala
 85 90 95

Cys Ser His Ala Leu Asn Lys Ala Asn Pro Arg Cys Pro Glu Ser Leu
 100 105 110

Thr Arg Asp Thr Ala Thr Glu Ile Ala Ile Asn Val Lys Ala Leu Tyr
 115 120 125

Asn Glu Thr Glu Ser Leu Leu Val Gly Arg Val Pro Leu Gln Leu Glu
 130 135 140

Ser Pro His Glu Glu Arg Val Ser Asn Ala Leu His Ser Val Glu Val
 145 150 155 160

Glu Leu Gln Lys Leu Thr Glu Ile Pro Trp Leu Tyr Tyr Ile Leu His
 165 170 175

Pro Asn Glu Asp Glu Glu Pro Pro Met Asp Cys Thr Lys Arg Asn Asn
 180 185 190

Arg Ser Thr Val Phe Arg Ile Val Pro Lys Phe Lys Lys Glu Lys Val
 195 200 205

Gln Lys Gln Lys Thr Ser Ser Gln Pro Gly Ser Gly Asp Thr Glu Ser
 210 215 220

Gly Ser Cys Glu Ala Asn Ser Pro Gly Asn
 225 230

<210> 24

<211> 96
 <212> PRT
 <213> Homo sapiens

<400> 24
 Met Ala Glu Val Glu Glu Thr Leu Lys Arg Leu Gln Ser Gln Lys Gly
 1 5 10 15
 Val Gln Gly Ile Ile Val Val Asn Thr Glu Gly Ile Pro Ile Lys Ser
 20 25 30
 Thr Met Asp Asn Pro Thr Thr Thr Gln Tyr Ala Ser Leu Met His Ser
 35 40 45
 Phe Ile Leu Lys Ala Arg Ser Thr Val Arg Asp Ile Asp Pro Gln Asn
 50 55 60
 Asp Leu Thr Phe Leu Arg Ile Arg Ser Lys Lys Asn Glu Ile Met Val
 65 70 75 80
 Ala Pro Asp Lys Asp Tyr Phe Leu Ile Val Ile Gln Asn Pro Thr Glu
 85 90 95

<210> 25
 <211> 696
 <212> PRT
 <213> Homo sapiens

<400> 25
 Met Lys Lys Lys Ile Glu Gly Tyr Gln Glu Phe Ser Ala Lys Pro Leu
 1 5 10 15
 Ala Ser Arg Val Asp Pro Glu Lys Asp Asn Glu Thr Asp Gln Gly Ser
 20 25 30
 Asn Ser Glu Lys Val Ala Glu Glu Ala Gly Glu Lys Gly Pro Thr Pro
 35 40 45
 Pro Leu Pro Ser Ala Pro Leu Ala Pro Glu Lys Asp Ser Ala Leu Val
 50 55 60
 Pro Gly Ala Ser Lys Gln Pro Leu Thr Ser Pro Ser Ala Leu Val Asp
 65 70 75 80
 Ser Lys Gln Glu Ser Lys Leu Cys Cys Phe Thr Glu Ser Pro Glu Ser
 85 90 95
 Glu Pro Gln Glu Ala Ser Phe Pro Ser Phe Pro Thr Thr Gln Pro Pro
 100 105 110
 Leu Ala Asn Gln Asn Glu Thr Glu Asp Asp Lys Leu Pro Ala Met Ala
 115 120 125
 Asp Tyr Ile Ala Asn Cys Thr Val Lys Val Asp Gln Leu Gly Ser Asp
 130 135 140

Asp	Ile	His	Asn	Ala	Leu	Lys	Gln	Thr	Pro	Lys	Val	Leu	Val	Val	Gln	
145					150					155					160	
Ser	Phe	Asp	Met	Phe	Lys	Asp	Lys	Asp	Leu	Thr	Gly	Pro	Met	Asn	Glu	
				165					170					175		
Asn	His	Gly	Leu	Asn	Tyr	Thr	Pro	Leu	Leu	Tyr	Ser	Arg	Gly	Asn	Pro	
			180					185					190			
Gly	Ile	Met	Ser	Pro	Leu	Ala	Lys	Lys	Lys	Leu	Leu	Ser	Gln	Val	Ser	
		195					200					205				
Gly	Ala	Ser	Leu	Ser	Ser	Ser	Tyr	Pro	Tyr	Gly	Ser	Pro	Pro	Pro	Leu	
	210					215					220					
Ile	Ser	Lys	Lys	Lys	Leu	Ile	Ala	Arg	Asp	Asp	Leu	Cys	Ser	Ser	Leu	
225					230					235					240	
Ser	Gln	Thr	His	His	Gly	Gln	Ser	Thr	Asp	His	Met	Ala	Val	Ser	Arg	
				245					250					255		
Pro	Ser	Val	Ile	Gln	His	Val	Gln	Ser	Phe	Arg	Ser	Lys	Pro	Ser	Glu	
		260						265					270			
Glu	Arg	Lys	Thr	Ile	Asn	Asp	Ile	Phe	Lys	His	Glu	Lys	Leu	Ser	Arg	
		275					280					285				
Ser	Asp	Pro	His	Arg	Cys	Ser	Phe	Ser	Lys	His	His	Leu	Asn	Pro	Leu	
	290					295					300					
Ala	Asp	Ser	Tyr	Val	Leu	Lys	Gln	Glu	Ile	Gln	Glu	Gly	Lys	Asp	Lys	
305					310					315					320	
Leu	Leu	Glu	Lys	Arg	Ala	Leu	Pro	His	Ser	His	Met	Pro	Ser	Phe	Leu	
				325					330					335		
Ala	Asp	Phe	Tyr	Ser	Ser	Pro	His	Leu	His	Ser	Leu	Tyr	Arg	His	Thr	
			340					345					350			
Glu	His	His	Leu	His	Asn	Glu	Gln	Thr	Ser	Lys	Tyr	Pro	Ser	Arg	Asp	
	355						360					365				
Met	Tyr	Arg	Glu	Ser	Glu	Asn	Ser	Ser	Phe	Pro	Ser	His	Arg	His	Gln	
	370					375					380					
Glu	Lys	Leu	His	Val	Asn	Tyr	Leu	Thr	Ser	Leu	His	Leu	Gln	Asp	Lys	
385					390					395					400	
Lys	Ser	Ala	Ala	Ala	Glu	Ala	Pro	Thr	Asp	Asp	Gln	Pro	Thr	Asp	Leu	
				405					410					415		
Ser	Leu	Pro	Lys	Asn	Pro	His	Lys	Pro	Thr	Gly	Lys	Val	Leu	Gly	Leu	
			420					425					430			
Ala	His	Ser	Thr	Thr	Gly	Pro	Gln	Glu	Ser	Lys	Gly	Ile	Ser	Gln	Phe	
		435					440					445				
Gln	Val	Leu	Gly	Ser	Gln	Ser	Arg	Asp	Cys	His	Pro	Lys	Ala	Cys	Arg	
	450					455					460					

Val Ser Pro Met Thr Met Ser Gly Pro Lys Lys Tyr Pro Glu Ser Leu
465 470 475 480
Ser Arg Ser Gly Lys Pro His His Val Arg Leu Glu Asn Phe Arg Lys
485 490 495
Met Glu Gly Met Val His Pro Ile Leu His Arg Lys Met Ser Pro Gln
500 505 510
Asn Ile Gly Ala Ala Arg Pro Ile Lys Arg Ser Leu Glu Asp Leu Asp
515 520 525
Leu Val Ile Ala Gly Lys Lys Ala Arg Ala Val Ser Pro Leu Asp Pro
530 535 540
Ser Lys Glu Val Ser Gly Lys Glu Lys Ala Ser Glu Gln Glu Ser Glu
545 550 555 560
Gly Ser Lys Ala Ala His Gly Gly His Ser Gly Gly Gly Ser Glu Gly
565 570 575
His Lys Leu Pro Leu Ser Ser Pro Ile Phe Pro Gly Leu Tyr Ser Gly
580 585 590
Ser Leu Cys Asn Ser Gly Leu Asn Ser Arg Leu Pro Ala Gly Tyr Ser
595 600 605
His Ser Leu Gln Tyr Leu Lys Asn Gln Thr Val Leu Ser Pro Leu Met
610 615 620
Gln Pro Leu Ala Phe His Ser Leu Val Met Gln Arg Gly Ile Phe Thr
625 630 635 640
Ser Pro Thr Asn Ser Gln Gln Leu Tyr Arg His Leu Ala Ala Ala Thr
645 650 655
Pro Val Gly Ser Ser Tyr Gly Asp Leu Leu His Asn Ser Ile Tyr Pro
660 665 670
Leu Ala Ala Ile Asn Pro Gln Ala Ala Phe Pro Ser Ser Gln Leu Ser
675 680 685
Ser Val His Pro Ser Thr Lys Leu
690 695

<210> 26

<211> 132

<212> PRT

<213> Homo sapiens

<400> 26

His Glu Ile Glu His Gly Glu Phe Glu Lys Asn Leu Tyr Gly Thr Ser
1 5 10 15

Ile Asp Ser Val Arg Gln Val Ile Asn Ser Gly Lys Ile Cys Leu Leu
20 25 30

Ser Leu Arg Thr Gln Ser Leu Lys Thr Leu Arg Asn Ser Asp Leu Lys
35 40 45

Pro Tyr Ile Ile Phe Ile Ala Pro Pro Ser Gln Glu Arg Leu Arg Ala
50 55 60

Leu Leu Ala Lys Glu Gly Lys Asn Pro Lys Pro Glu Glu Leu Arg Glu
65 70 75 80

Ile Ile Glu Lys Thr Arg Glu Met Glu Gln Asn Asn Gly His Tyr Phe
85 90 95

Asp Thr Ala Ile Val Asn Ser Asp Leu Asp Lys Ala Tyr Gln Glu Leu
100 105 110

Leu Arg Leu Ile Asn Lys Leu Asp Thr Glu Pro Gln Trp Val Pro Ser
115 120 125

Thr Trp Leu Arg
130

<210> 27
<211> 95
<212> PRT
<213> Homo sapiens

<400> 27
Met Leu Ser Ser Gly Thr Val Gly Lys Arg Gln Asn Asn Ser Gln Phe
1 5 10 15

Gln Val Pro Lys Met Pro Trp Lys Ala Ser Val Glu Gly Thr Arg Thr
20 25 30

Asn His Pro Ala Lys Ile Pro Ala Gly Ser Ser Ser Ala Leu Gly Ser
35 40 45

Trp Arg His Asp Gly Leu Leu Gln Glu His Thr Glu Lys Ser Thr Gln
50 55 60

Lys Gly Tyr Phe Gly Glu Ala Val Trp Thr Leu Arg Cys Thr Ala Glu
65 70 75 80

Gly Glu Leu Gly Asn Pro Arg Pro Glu Val Ser Ile Gly Tyr Phe
85 90 95

<210> 28
<211> 558
<212> PRT
<213> Homo sapiens

<400> 28
Met Tyr Ser Pro Ile Ile Tyr Gln Ala Leu Cys Glu His Val Gln Thr
1 5 10 15

Gln Met Ser Leu Met Asn Asp Leu Thr Ser Lys Asn Ile Pro Asn Gly
20 25 30

Ile Pro Ala Val Pro Cys His Ala Pro Ser His Ser Glu Ser Gln Ala
35 40 45

Thr	Pro	His	Ser	Ser	Tyr	Gly	Leu	Cys	Thr	Ser	Thr	Pro	Val	Trp	Ser	
	50					55					60					
Leu	Gln	Arg	Pro	Pro	Cys	Pro	Pro	Lys	Val	His	Ser	Glu	Val	Gln	Thr	
65					70					75					80	
Asp	Gly	Asn	Ser	Gln	Phe	Ala	Ser	Gln	Gly	Lys	Thr	Val	Ser	Ala	Thr	
				85					90					95		
Cys	Thr	Asp	Val	Leu	Arg	Asn	Ser	Phe	Asn	Thr	Ser	Pro	Gly	Val	Pro	
			100					105					110			
Cys	Ser	Leu	Pro	Lys	Thr	Asp	Ile	Ser	Ala	Ile	Pro	Thr	Leu	Gln	Gln	
		115					120					125				
Leu	Gly	Leu	Val	Asn	Gly	Ile	Leu	Pro	Gln	Gln	Gly	Ile	His	Lys	Glu	
	130					135					140					
Thr	Asp	Leu	Leu	Lys	Cys	Ile	Gln	Thr	Tyr	Leu	Ser	Leu	Phe	Arg	Ser	
145					150					155					160	
His	Gly	Lys	Glu	Thr	His	Leu	Asp	Ser	Gln	Thr	His	Arg	Ser	Pro	Thr	
				165					170					175		
Gln	Ser	Gln	Pro	Ala	Phe	Leu	Ala	Thr	Asn	Glu	Glu	Lys	Cys	Ala	Arg	
			180					185					190			
Glu	Gln	Ile	Arg	Glu	Ala	Thr	Ser	Glu	Arg	Lys	Asp	Leu	Asn	Ile	His	
		195					200					205				
Val	Arg	Asp	Thr	Lys	Thr	Val	Lys	Asp	Val	Gln	Lys	Ala	Lys	Asn	Val	
	210					215					220					
Asn	Lys	Thr	Ala	Glu	Lys	Val	Arg	Ile	Ile	Lys	Tyr	Leu	Leu	Gly	Glu	
225					230					235					240	
Leu	Lys	Ala	Leu	Val	Ala	Glu	Gln	Glu	Asp	Ser	Glu	Ile	Gln	Arg	Leu	
				245					250					255		
Ile	Thr	Glu	Met	Glu	Ala	Cys	Ile	Ser	Val	Leu	Pro	Thr	Val	Ser	Gly	
			260					265					270			
Asn	Thr	Asp	Ile	Gln	Val	Glu	Ile	Ala	Leu	Ala	Met	Gln	Pro	Leu	Arg	
		275					280					285				
Ser	Glu	Asn	Ala	Gln	Leu	Arg	Arg	Gln	Leu	Arg	Ile	Leu	Asn	Gln	Gln	
	290					295					300					
Leu	Arg	Glu	Gln	Gln	Lys	Thr	Gln	Lys	Pro	Ser	Gly	Ala	Val	Asp	Cys	
305					310					315					320	
Asn	Leu	Glu	Leu	Phe	Ser	Leu	Gln	Ser	Leu	Asn	Met	Ser	Leu	Gln	Asn	
				325					330					335		
Gln	Leu	Glu	Glu	Ser	Leu	Lys	Ser	Gln	Glu	Leu	Leu	Gln	Ser	Lys	Asn	
			340					345					350			
Glu	Glu	Leu	Leu	Lys	Val	Ile	Glu	Asn	Gln	Lys	Asp	Glu	Asn	Lys	Lys	
		355					360					365				

Phe Ser Ser Ile Phe Lys Asp Lys Asp Gln Thr Ile Leu Glu Asn Lys
 370 375 380
 Gln Gln Tyr Asp Ile Glu Ile Thr Arg Ile Lys Ile Glu Leu Glu Glu
 385 390 395 400
 Ala Leu Val Asn Val Lys Ser Ser Gln Phe Lys Leu Glu Thr Ala Glu
 405 410 415
 Lys Glu Asn Gln Ile Leu Gly Ile Thr Leu Arg Gln Arg Asp Ala Glu
 420 425 430
 Val Thr Arg Leu Arg Glu Leu Thr Arg Thr Leu Gln Thr Ser Met Ala
 435 440 445
 Lys Leu Leu Ser Asp Leu Ser Val Asp Ser Ala Arg Cys Lys Pro Gly
 450 455 460
 Asn Asn Leu Thr Lys Ser Leu Leu Asn Ile His Asp Lys Gln Leu Gln
 465 470 475 480
 His Asp Pro Ala Pro Ala His Thr Ser Ile Met Ser Tyr Leu Asn Lys
 485 490 495
 Leu Glu Thr Asn Tyr Ser Phe Thr His Ser Glu Pro Leu Ser Thr Ile
 500 505 510
 Lys Asn Glu Glu Thr Ile Glu Pro Asp Lys Thr Tyr Glu Asn Val Leu
 515 520 525
 Ser Ser Arg Gly Pro Gln Asn Ser Asn Thr Arg Gly Met Glu Glu Ala
 530 535 540
 Ser Ala Pro Gly Ile Ile Ser Ala Leu Phe Lys Thr Gly Phe
 545 550 555

<210> 29
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 29
 Met Thr Asn Pro Phe Leu Ser Ser Val Ser Thr Phe Phe Ser Pro Phe
 1 5 10 15
 Leu Pro Lys Ala Asn Phe Leu Cys Ser Ala His Arg Asn Ala His Ser
 20 25 30
 Val Leu Arg Lys Glu Val Leu Cys Asn Ser Lys Ile Ala Ser Lys Ser
 35 40 45
 Gln Leu Asp Arg
 50

<210> 30
 <211> 5
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC_FEATURE
 <222> (1)..(5)
 <223> Serine/threonine phosphatase invariant region

<220>
 <221> VARIANT
 <222> (3)..(3)
 <223> X is any naturally-occurring amino acid

<400> 30

Gly Asp Xaa His Gly
 1 5

<210> 31
 <211> 7
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC_FEATURE
 <222> (1)..(7)
 <223> Serine/threonine phosphatase invariant region

<220>
 <221> VARIANT
 <222> (3)..(3)
 <223> X is any naturally occurring amino acid

<400> 31

Gly Asp Xaa Val Asp Arg Gly
 1 5

<210> 32
 <211> 5
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC_FEATURE
 <222> (1)..(5)
 <223> Serine/threonine phosphatase invariant region

<400> 32

Arg Gly Asn His Glu
 1 5